

**Amendments to the Specification**

**Please replace paragraph [33] of the patent application as originally filed with the following amended paragraph [33]:**

[0033] Effectiveness - The "effectiveness" is a measurement of the benefits resulting from past prestaging operations. It can be viewed as the return of the investment made in prestaging the data so far. The return on the prestaging is good if the prestaged data in the cache is requested by the host. This results in a lower latency of the host I/O operation. On the other hand, if the prestaged data is demoted from the cache without having a host read hit, then it has wasted system resources, such as CPU power, memory space and I/O bandwidth, in both staging the data and in keeping the data resident in cache. The benefits of prior prestaging decisions can be evaluated by determining whether the prestaged data has been accessed by the host or not.

**In addition, please replace paragraph [37] of the patent application as originally filed with the following amended paragraph [37]:**

[0037] Figure 1 is a block diagram representing a high-level view of a storage system in which data might be prestaged in accordance with the invention. A host computer system 10 is typically connected to a storage controller 12 through a network 11. As an example, the storage controller 12 may be a SAN Volume Controller manufactured by IBM Corporation and the network 11 may be a Fibre Channel storage area network. The storage controller 12 is connected to a storage disk 14 through a network 13. The storage

disk 14 may be a disk array FAST-T600 offered by IBM Corporation and the network 13 may be another storage area network. The host computer 10 accommodates many software components, including an application program 15 which sends input and output operations to the storage controller 12. The application program 15 must provide the storage controller 12 with details of a data request such as the kind of operation involved, the storage volume that the operation is for, the logical block address of the first block of the data, and the size of the data to be processed. An operation might be a read of data from the disk 14 (an output operation) or a write of data to the disk 14 (an input operation). The storage controller 12 receives the input or output operations and processes them accordingly. This processing may or may not involve a staging operation or a destaging operation on the storage disk 14. On receipt of responses from the disk 14, the storage controller 12 returns the completion status of the operation as well as any applicable data to the application 15. The host computer 10 and the storage controller 12 may communicate with each other using a network protocol that is suitable for the network 11, e.g., the Fibre Channel protocol. The storage controller 12 and the disk 14 may communicate with each other using a network protocol applicable to the network 13 such as the Fibre Channel protocol. Data from the storage disk 14 might be prestaged in a high-speed cache memory typically implemented using volatile memory. The cache may reside anywhere in the input/output path between the application 15 on the host computer 10 and the disk 14.